

**IN THE UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

INTELLECTUAL VENTURES I,
LLC; INTELLECTUAL VENTURES
II, LLC,

Plaintiffs,
v.
LENOVO GROUP LTD., LENOVO
(UNITED STATES) INC.,
LENOVOEMC
PRODUCTS USA, LLC, EMC
CORPORATION, AND NETAPP,
INC.

Defendants.

C.A. No. 1:16-cv-10860-PBS
LEAD CASE

PLAINTIFFS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

Plaintiffs Intellectual Ventures I, LLC and Intellectual Ventures II, LLC’s (collectively, “IV”) proposed constructions for U.S. Patent No. 6,968,459 (“the ’459 Patent”) should be adopted over those proposed by Defendants EMC Corporation, Lenovo (United States) Inc., LenovoEMC, Products, USA, LLC, and NetApp, Inc. (collectively, “Defendants”). Defendants’ arguments selectively rely on isolated statements from the patent specification, while ignoring other descriptions of the claim terms in the claim language itself and elsewhere in the intrinsic record. Defendants’ proposals are incomplete and risk confusion by weighing down clear terms with artificial and extraneous additional limitations.

II. DISPUTED CONSTRUCTIONS FOR THE ’459 PATENT

A. “detecting a storage device within a storage drive” (claims 15, 18)

The gravamen of Defendants’ argument for their proposed construction is that “a storage device” must mean “a **removable** storage device” that excludes a hard disk. *See* Dkt. 231 at 6. Defendants make no separate argument for their proposed construction of “storage drive”; it simply follows from their proposed construction of “storage device,” and argument that a “storage device” cannot be a hard disk drive. *See* Dkt. 231 at 5-8.

But this ignores the explicit language in the ’459 patent that storage devices include, but are not limited to, both removable media drives and internal hard disks.

For example, the patent states, “Software applications 136 and data are typically stored via one of the storage devices, ***which may include the hard disk 120.***” ’459 patent at 3:25-28 (emphasis added); *see also, e.g.*, ’459 patent at 6:50-54 (“In addition, data stored on other storage devices, ***such as internal hard disk 120,*** tape cartridges . . .”) (emphasis added). Similarly, the sentence right before the specification language that Defendants quote on page 6 of their brief states, “Various storage drives are connected to the input/output bus 118 ***including hard disk drive 120*** and one or more removable media drives 121 that are used to access one or more removable storage devices 151.” ’459 patent at 3:5-8 (emphasis added).

Ignoring these explicit statements in the patent specification that a “storage device” can include a hard disk drive, Defendants effectively argue that a “storage device” as that term is used in the patent claims must only refer to a **removable** storage medium. This argument is expressly refuted by the claims of the ’459 patent itself. For example, dependent claim 46 of the patent recites “the computer of claim 39, **wherein the storage device is a removable storage medium.**” (emphasis added). If “storage device” only referred to removable storage media, as Defendants’ argue, then this claim language would be entirely superfluous. Instead, it confirms that Defendants are attempting to impose an improper limitation inconsistent with the teachings and disclosures of the ’459 patent.

Defendants selectively rely on quotations that make references to removable storage media as examples of storage devices, while ignoring the other teachings and disclosures of the patent. The '459 patent clearly states that each device identified in the language relied on by Defendants is only an example. The Federal Circuit has repeatedly made clear that examples in the specification are not claim limitations. *See JVW Enters., Inc. v. Interact Accessories*, 424 F.3d 1324, 1335 (Fed. Cir. 2005) (courts will “not import limitations into claims from examples or embodiments appearing only in a patent’s written description, even when a specification describes very specific embodiments of the invention or even describes only a single embodiment”). And while the '459 patent states that a “storage device” **could be** a removable storage device, it also can include an internal hard disk. *See, e.g.*, '459 patent at 3:5-8, 3:25-28, 6:50-54.

Defendants’ proposed construction is belied not only by the plain language of the patent, but by the testimony of their own expert, Dr. John D. Kubiatowicz. While Defendants submitted a declaration from Dr. Kubiatowicz about this issue, that declaration is notably devoid of any proposed construction on this term, or even an endorsement of Defendants’ arguments. In fact, at deposition, Dr. Kubiatowicz conceded that a “storage device” is not limited to a removable media device, but can also include a hard disk. Prof. Kubiatowicz Tr. at 87:16-20 (“A. So a hard disk drive is an example of a storage device, as discussed in the '459 patent.”); 90:12-91:3

(citing '459 patent at 6:50-54); 115:25-116:2 (“Well, the internal hard disk drive is an example of a storage device that is not a removable media drive.”). While expert testimony from Defendants’ expert could not be used to vary or contradict the claim language, here Defendants’ expert concedes that Defendants’ arguments are incorrect. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996) (use of extrinsic evidence is proper only if it does not “vary or contradict the claim language” or “the import of other parts of the specification”); *see also Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1359 (Fed. Cir. 2004) (“[E]ven when expert evidence has been offered with respect to the issue of claim construction, we must determine whether that evidence comports with the intrinsic evidence in the case.”).

Moreover, Defendants misstate the specification language relating to “storage drive.” *See* Dkt. 231 at 8. The '459 patent explains that a “removable media drive represents a device **suitable** for servicing access requests for storage device 151” ('459 patent at 3:13-17 (emphasis added)), not that the drive actually “**services** access requests” itself, as suggested by Defendants. *See* Dkt. 231 at 8. This language is accurately reflected by IV’s proposed construction that a storage drive is the hardware and software used to host and represent the storage device in a computer or computer system. Unlike Defendants’ proposed construction, IV’s proposed construction does not import any extraneous language that would limit “storage

device” to only removable media, contrary to the express language of the specification and Defendants’ own expert witness’s testimony. Accordingly, IV’s proposed construction should be adopted.

B. “device-specific security information” (claim 15)

The sole dispute is whether Defendants’ list of exclusions as to what “information specific to the storage device” encompasses is proper. Defendants argue that “device-specific security information” is distinguished from other types of security information in the ’459 patent. But the PTAB has already considered this argument in a related IPR challenge and *rejected it* by choosing not to impose such exclusions in its construction of the term as: “information particular to, but not necessarily unique to, a storage device and used to secure access to the storage device.” Dkt. 233-2 (IPR2016-01404, Final Written Decision), at 12. And, while the PTAB uses the “broadest reasonable interpretation consistent with the specification” (“BRI”) standard, *In re CSB-Sys. Int’l, Inc.*, 832 F.3d 1335, 1341 (Fed. Cir. 2016), which is broader than the *Phillips* standard used here, the BRI standard does not allow the PTAB to give an “unreasonably broad” construction that does not reflect a claim’s plain language. *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (citation omitted), *overruled on other grounds by Aqua Prod., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017). Rather, under the BRI standard, like under *Phillips*, “claims should always be read in light of the specification and teachings in

the underlying patent,” and the PTAB’s construction “cannot be divorced from the specification and the record evidence.” *Id.* (citations and quotation marks omitted). Moreover, “[i]n many cases, the claim construction will be the same under the *Phillips* and BRI standards.” *In re CSB-Sys. Int’l, Inc.*, 832 F.3d 1335, 1341 (Fed. Cir. 2016).

Accordingly, the Court should adopt IV’s proposed construction, which is consistent with the construction the PTAB has already adopted, instead of including Defendants’ list of exclusions that the PTAB already rejected.

C. **“sensing whether a storage device has device-specific security information . . .” (claim 15) / “sensing whether the storage device has security information . . .” (claim 18)**

Defendants fail to explain why this claim language requires any special interpretation or re-writing in departure from its ordinary meaning. Defendants’ proposal first replaces the ordinary English word “sensing” with the different (and not necessarily synonymous) word “determining.” Defendants offer no real explanation that “sensing” needs to be changed to “determining.” Next, Defendants seek to simply add words to the claim language. They reiterate the word “has” that appears in the claim language as part of their construction, but seek to add the additional clause “stored on it” that does not appear in the claims. But “has” is a commonly understood word that requires no special construction. *Phillips v. AWH*

Corp., 415 F.3d 1303, 1314 (Fed. Cir. 2005). Defendants fail to explain why this ordinary word cannot be understood without writing additional words. In fact, the language of claim 15 shows that adding these words is unnecessary as a construction because the language of claim 15 recites “sensing whether a storage device has device-specific security information stored thereon.” If Defendants’ construction were adopted, this claim would be rewritten in nonsensical fashion to read “determining whether the storage device has device-specific security information stored on it stored thereon.”

Defendants next argue that the claim should also be rewritten with an entirely new and extraneous sentence reciting an additional negative limitation. They suggest that this purported addition is the result of a claim construction position IV took during IPR proceedings. This is simply false. There were two IPR proceedings involving this patent, and IV did not advocate the construction Defendants suggest in either of them. First in IPR 2016-01404, the claim construction portion of IV’s relevant submission does not even mention this claim phrase, nor advocate a construction of it. *See* Dkt. # 231-4, at 6 (page 12 of 48 of that document in the Court’s docket). Similarly, in IPR 2017-0467, the claim construction portion of IV’s submission neither mentions this term, nor advocates the construction of any term. *See* Dkt. # 231-3, at 5 (page 11 of 45 of that document in the Court’s docket). Thus,

Defendants' suggestion that IV somehow advocated a different construction before the PTAB is completely false.

Even though IV never proposed Defendants' new extraneous construction in IPR proceedings (as noted above), Defendants nonetheless try to manufacture a disclaimer to support their extraneous limitation. Defendants try to manufacture a disclaimer by suggesting that IV's arguments somehow implied a construction. To establish such a disclaimer, Defendants must meet the standard for establishing a prosecution disclaimer. *See Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1360 (Fed. Cir. 2017). To satisfy that standard, Defendants must show that the disavowing actions or statements were "both clear and unmistakable Where the alleged disavowal is ambiguous, or even amenable to multiple reasonable interpretations, we have declined to find prosecution disclaimer." *Avid Tech., Inc. v. Harmonic, Inc.*, 812 F.3d 1040, 1045-46 (Fed. Cir. 2016) (internal citations and quotations omitted). Defendants' efforts to manufacture a disclaimer out of IV's IPR arguments falls far short of meeting this high burden.

Defendants' citations of IV's purported disclaimer for Claim 15 fail because Defendants rely on the fact that IV argued that claim 15 required "sensing" whether security information "is stored on the storage device." That is not a disclaimer, it is the actual language of claim 15. The full text of the relevant language as it appears in Claim 15 is: "sensing whether a storage device has device-specific security

information *stored thereon*;’. ’459 patent at 10:12-13 (emphasis added). Thus, Defendants’ purported “disclaimer” is nothing of the sort. Defendants attempt to use these non-disclaimer arguments to create a disclaimer that would apply even without the “stored thereon” language of claim 15. Such arguments are misleading at best.

Defendants arguments regarding Claim 18 improperly try to bootstrap from the non-disclaimer regarding claim 15 discussed above. Claim 18 does not have the “stored thereon” language following “sensing whether the storage device has security information . . .”, *see* ’459 patent at 10:39-42, which is why IV did not make such a distinction in connection with IV’s arguments on Claim 18. Defendants’ reliance on arguments about claim 15 are highly misleading in this context. Defendants fail to point to clear and unmistakable language of disavowal regarding claim 18. Rather, the focus of IV’s arguments with respect to Claim 18 was whether the storage device “has” the type of security information described in the claim – exactly what the claim recites.

For example, in Dkt. 231-3 at 27-28, IV reiterated its explanation that the prior art did not disclose appropriate device-specific security information, and noted that the petitioners (Defendants) were incorrectly conflating the item (a pseudorandom string) that they contended to be device-specific security information for claim 15 with the item they contended to be security information generated from a

combination of device-specific security information and user-specific information for claim 18. Further, all IV argued was that any pseudorandom string Defendants relied upon was newly generated each time a computer accessed the storage device, and thus, the computer could never sense whether the device “has” the string. This does not and cannot equate to Defendants’ manufactured extraneous limitation.

Defendants’ arguments regarding IV’s other IPR response about claim 18 (Dkt. 231-4 at 34-35) fare no better. There, IV merely explained that the petitioner did not demonstrate any act of sensing the presence or absence of security information (describing that the prior art Kimura only compares “whether the two versions of the security code match. If they match, then Kimura allows access to the memory; if they do not match, Kimura refuses access. In either case, the storage device has the supposed ‘*security information*’ in the form of the security code read from memory in step 305.”).

Given Defendants’ failure to show a clear and unambiguous disclaimer by IV., Defendants cannot justify their request import an extra limitation that “[t]his step requires sensing the presence of security information stored on the device, rather than sensing whether a password is required to access the device.” As discussed in IV’s opening brief, such an extra limitation would read out a preferred embodiment that contemplates an exemplary storage device (labeled 151 in the specification), with some device-specific security information being separately maintained on a

different hard drive (labeled 120 in the specification). *See* '459 patent at 7:43-8:60, and particularly 8:38-41 (noting that a list of bad sectors for storage device 151 may be maintained in hard disk 120); Dkt. 233 at 11-12.

This term should be left to its plain and ordinary meaning.

D. “security information generated from a combination of device-specific information associated with the storage device and user-specific information associated with a user” / “the security information” (claim 18)

The only disputes between the parties’ proposed constructions are: (1) whether such information is “for the purpose of securing access” or instead “is used to control access,” and (2) whether “[t]his step requires more than using information falling under both categories” or not.

Regarding the first dispute, Defendants provide no explanation as to why they proposed the additional language “that is used to control access” instead of IV’s language, “for the purpose of securing access.” But as IV set forth in its opening brief, IV’s proposed construction that such information is “for the purpose of securing access” should be adopted because it accurately reflects the plain meaning of the terms as they are used in the intrinsic evidence: that such information is used for the purpose of preventing or permitting write access to the storage device. Dkt. 233 at 14-15.

Regarding the second dispute, Defendants' proposed construction that “[t]his step requires more than using information falling into both categories” necessitates the combining of the *entirety* of “device-specific information” with the entirety of “user-specific information”. But Defendants' citations to the '459 patent does not support such a proposition. Rather, Defendants' citation to the '459 patent at 6:4-8 clearly states it is but one *example*: “*In one embodiment*, in order to generate the cryptographic key, the storage manager combines, *such as* by concatenating, all or various portions of information . . .” (emphasis added).

Second, Defendants misrepresent IV's argument before the PTAB as a disclaimer. Rather, IV argued that if a password was the only type of information, then it could not qualify as *both* the different types of “device-specific information” and “user-specific information” required by the plain and ordinary meaning of the claim language. A password could be either “device-specific information” *or* “user-specific information,” but not both (i.e., a password could not combine with itself under this claim language). *See* Dkt. 231-3 at 34 (“Simply falling into both categories *does not suffice to be a combination of both categories*”) (emphasis added). Since there was no clear and unambiguous disclaimer, Defendants' extraneous limitation should not be imported into the claim language. *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362 at 1366-67 (Fed. Cir. 2012).

E. “encrypting digital data using the security information.” (claims 15 and 18)

IV's Proposed Construction	Defendants' Proposed Construction
Using the security information to create an encrypted form of the digital data.	Using the security information to mathematically transform digital data into a secret, encoded form.

The parties' dispute centers around the meaning of "encrypting." Defendants have not cited to any intrinsic evidence that would impose an extraneous limitation that "encrypting" means to "mathematically transform." Defendants rely solely on extrinsic evidence. But as Dr. Kubiatowicz testified, the meaning of "encrypting" is unambiguous as it is used in the '459 patent. Kubiatowicz Tr. at 69:21-70:4; 83:3-84:9. And extrinsic evidence should only be used where the intrinsic evidence leaves the meaning of the claim ambiguous. *Vitronics Corp.*, 90 F.3d at 1583.

Moreover, adding the term "mathematical" would make the term unnecessarily confusing to a jury as a jury could assume that "mathematically transform" necessitates some sort of mathematical equation or formula to effectuate the transformation. But Defendants' expert, Dr. Kubiatowicz admitted that a "mathematical" transformation would apply to any operation on computer data. He defined "mathematical" as "anything that operates on numbers to produce other numbers." Kubiatowicz Tr. at 70:25-71:12. Dr. Kubiatowicz testified that since a computer represents all information in ones and zeros, everything a computer does with digital data is a "mathematical" process. Kubiatowicz Tr. at 75:9-77:7; *see also*

id. at 70:25-71:12. For example, Dr. Kubiatowicz testified that he believed even a substitution cipher¹ would be considered a mathematical transformation because it substitutes one symbol for another symbol, and those symbols are represented as numbers inside a computer. *Id.* at 74:6-75:12. Given this clear admission by Defendants' own expert that any transformation of data in a computer would be a mathematical transformation, adding the words "mathematically transform" is redundant and unnecessarily confusing to prospective jurors. Adding this language to the construction is therefore unnecessary and inappropriate.

IV's proposed construction should be adopted because it is consistent with the plain meaning of the term in the intrinsic record, without adding unnecessarily confusing and potentially limiting language, and is consistent with constructions recognized by multiple courts, including the courts cited by Defendants who construed "encrypt" or "encryption" without imposing the unnecessary, confusing extra language of "mathematical". *See, e.g., Tristrata, Inc. v. Microsoft Corp.*, No. 11-CV-03797-JST, 2013 WL 5645984 at *10 (N.D. Cal. Oct. 16, 2013) (construing "encrypt" to mean "to disguise information such that it is unreadable to anyone who

¹ A substitution cipher consists of substituting every plaintext character for a different ciphertext character. An example key for a substitution cipher is:

plain alphabet :	abcdefghijklmnopqrstuvwxyz
cipher alphabet:	phqgiumeaylnofdxjkrcvstzbw

Source: <http://practicalcryptography.com/ciphers/simple-substitution-cipher/>

does not have the key necessary to decrypt it.”); *Diego Inc. v. Audible Inc.*, 05-00464 (W.D. Wash. March 27, 2006) (construing “encrypt” as “to encipher or encode by altering information”), and *Datatreasury Corp. v. Ingenico S.A.*, 02-00095 (E.D. Tex. Nov. 2, 2004) (referencing *Newton’s Telecom Dictionary* (1997), construing “encrypt” as “the transformation of data into a form unreadable by anyone without a secret decryption key. Its purpose is to ensure privacy by keeping the information hidden from anyone for whom it is not intended”).

III. CONCLUSION

Defendants’ proposed constructions run afoul of multiple principles of proper claim interpretation, and generally seek to inject extraneous limitations that are neither supported by the intrinsic evidence, nor even consistent with that evidence in many instances. Under the clear rules for claim interpretation set forth by the Federal Circuit, Defendants’ proposals should be rejected.

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INTELLECTUAL VENTURES I, LLC and
INTELLECTUAL VENTURES II, LLC,
By their attorneys,

/s/ Brian Ledahl

Brian Ledahl (CA SBN 186579)
Theresa M. Troupson (CA SB No. 310215)
RUSS AUGUST & KABAT
12424 Wilshire Boulevard, 12th Floor
Los Angeles, CA 90025
Telephone: (310) 826-7474
Facsimile: (310) 826-6991
bledahl@raklaw.com
ttroupson@raklaw.com

David S. Godkin (BBO #196530)
James E. Kruzer (BBO #670827)
BIRNBAUM & GODKIN, LLP
280 Summer Street
Boston, MA 02210
Telephone: (617) 307-6100
godkin@birnbaumgodkin.com
kruzer@birnbaumgodkin.com

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/s/ Brian Ledahl

Brian Ledahl